





### Aloha,

The public conversation, as well as private conversations, about our traffic issues has divided us for many years...especially for the last four, as the prospect of spending \$6 billion on rail has loomed large. There are very committed people on both sides of the issue, and as with everything, there are two sides –actually many more – to the story.

I have been troubled about the prospect of a steel-on-steel heavy rail project since the beginning. It has a huge cost, most of which we all would have to bear. It would be very ugly. The noise would drown out the sounds of our island. And it really wouldn't solve our traffic problems.

With the current international and national financial crises, and our major industry (tourism) suffering, the cost of heavy rail is out the question. We can't afford it. We can't maintain it. Even if the country weren't in terrible financial shape, we would still have to raise property taxes on businesses and individuals here in Hawaii, some say by more than 40%, to pay for it and maintain it.

After the primary, I asked Dr. Panos Prevedouros from the University of Hawai'i to assist me with a transit plan that:

- Could start right away
- Create more local jobs (many rail jobs would come from out of state)
- Would be affordable
- Could be done in stages
- Would significantly affect traffic congestion
- Would not include steel-on-steel rail
- Would not depend as heavily on federal monies

What I am introducing here is a plan that includes some elements of Dr. Prevedouros' own plan, but eliminates the tolls that concern so many. It is a plan that is aggressive, can start now, and will solve traffic problems. It is a plan that reaches Ewa Beach and Waianae, without those residents having to drive or take a bus to the first rail station. It includes the University of Hawai'i.

I ask you to review it with an open mind. Knowing now that we cannot afford rail, that the federal government is very unlikely to have money to spare -- I wanted to offer a serious look at what really could be done to help our island and its traffic problems.

Please read the note from Dr. Prevedouros before you read the plan. Thank you.





### A Message from Professor Panos Prevedouros

As many of you know, I have been focused on the traffic problems of our island for many years. I even ran for Mayor this year because I believe so completely that the infrastructure of our island is our number one priority, and that we cannot afford nor should we have a steel-on-steel heavy rail line.

In addition to infrastructure, I know that our traffic problems must be addressed, at an affordable cost, and one which is appropriate to an island economy where tourism (dependent on natural beauty) is its number one industry.

When Ann asked me to assist her in putting together The Kobayashi Transit Plan, I was honored. As she has noted in her letter, Ann's plan includes most of the elements of my original plan.

I have reviewed the elements of this plan with expert engineers from all over the world, including some of my fellow consultants on the building of the Attica Toll way in Greece. Built for the Athens 2004 Olympics, it was given two awards by the International Road Federation, one for being one of the safest freeways in the world in 2006 and another for being one of the most environmentally sensitive freeways in the world, in 2008.

Professionally, I can say to you that all of the elements of this plan can be done. Everything that is called for here is in place and operational somewhere else in the world.

Technology for transit has far surpassed rail, and this plan will allow us to perform targeted micro surgery to make huge differences. Rail, by contrast, would be equivalent to open heart surgery, taking huge risks – and in fact, not making much of a difference. To continue the analogy, I strongly believe that rail would kill the patient.

Like Ann, I urge you to keep an open mind and have faith that we definitely can solve Oahu's traffic congestion problems with alternatives that are far more respectful of our Aina, cost less than half as much as rail and require little or no condemnation of private land.

Sincerely,

Panos Prevedouros, PhD.



## The Kobayashi Transit Plan A Sensible Solution to our Traffic Problems.

#### ■ Congestion is everywhere.

The biggest problem we face today is traffic congestion. It is not just on our roads. It is in our skies. It is in our crowded harbors. Governments throughout the world and especially the Federal Government are looking at traffic reducing solutions for land, air and sea.

We wait on the roads because of traffic congestion. We wait at airports because of traffic congestion. And goods all over the world wait on the ocean because of traffic congestion.

Economic successes the world-over have bred traffic congestion, and we need to look at new, more affordable ways to get rid of it. If you are interested in learning more about the federal government's ideas about traffic congestion, go to <a href="https://www.fightgridlocknow.gov">www.fightgridlocknow.gov</a>

#### Affordable, local planning vs. Big Expensive Solutions

More and more, we will have to turn to more affordable, niche solutions to affect traffic at specific bottlenecks, and to undertake traffic technologies as simple as synchronization of our lights to move people faster. Big Expensive Solutions like steel-on-steel rail are ineffective because of cost, they don't affect everyone, they don't really affect traffic and they themselves eventually become traffic problems themselves.

#### Local jobs are critical

The Big Expensive Solutions inevitably require imported, often foreign talent. Affordable, local planning means that local jobs are preserved, and in fact these "do-more-with-less" solutions mean far more local jobs for our people.

This plan is an affordable solution that uses local labor, existing and reliable technologies, and does very little to change the visual sight planes on our island.



## The Kobayashi Transit Plan A Sensible Solution to our Traffic Problems.

#### Why this plan works for our City.

- We can start now. This means all and more local jobs. (no foreign workers imported).
- No specialized labor to install or maintain vehicles or structure of the plan.
- There are no tolls involved in the plan . As always, there will be fares for buses.
- The fixed guideway/bus lane will run at over 50 mph providing a travel time from the Waipahu on-ramp to downtown of 12 minutes.
- There will be point-to-point express buses every 15 minutes.
- Congestion relief on H-1 because of the elevated zipper lanes.
- Traffic should move more smoothly island-wide because of traffic light synchronization and improved handling of accidents.
- This plan calls for minimal lane taking.
- The Express Buses will be adaptable to non-fossil fuel propulsion technology like fuel cells.
- Fewer transfers and same or better time than rail.
- Far less expensive.
- Reliable travel times.
- This plan is flexible, expandable, adaptable with familiar technology.
- If the federal government is solvent, this plan will qualify for Federal Transportation Administration (FTA) and possibly even Department of Transportation (DOT) highway funds
- A large part of the plan has already been cleared through an EIS by the State.
- Removes all buses and vanpools from the zipper lanes

The total cost of this plan is estimated at between \$2.5 and \$3 billion including contingencies.



### The Kobayashi Transit Plan A Sensible Solution to our Traffic Problems.

#### Key Elements of the Plan

- Elevated Zipper Lanes and Express Busways: EZ Way
- Signal Optimization
- Schedule Changes
- Bottleneck Fixes
- New Ward Center Bus Terminal

#### Signal Optimization

Signal optimization is also known as traffic synchronization. This simple solution has been available for decades, although technology has been improved remarkably since the mid-1990s.

Signal optimization means that bottlenecks can be addressed. This will require the cooperation of the City & County and the State. This should not be a problem because it is such an obvious and important solution. All traffic lights on Oahu are operated by the City & County.

To make a long story short: with synchronization, once you get a green light and stay at the posted speed, you're green to go, all the way to your destination.

#### Schedule Changes

Another niche fix, this plan recommends that TheBus and TheHandiVan schedules and routes be upgraded with advanced technologies.

Some offices of the State Government have already gone to 4x10 (instead of 5x8) work weeks and employees love it. Doing as much as we can to change work schedules and encourage telecommuting will really help.

This plan also recommends that the City and State work with the University of Hawaii to change its start time to 9:00 a.m., thus rendering morning traffic that looks a great deal more like summertime traffic all year.



### -Key Elements of the Plan

#### **Bottleneck Fixes**

Bottleneck fixes may involve sequencing of traffic lights and/or adding overpasses and underpasses. An example of where an overpass was used to address a bottleneck in Oahu is at the Likelike/ Kahekili interchange.

"Bottlenecks may be caused by a physical disruption, such as a reduced number of lanes, a change in grade, or an onramp with a short merge lane. Such bottlenecks recur predictably at the same time of day and same day of week. Nonrecurring bottlenecks are caused by collisions or highway repairs that block one or more lanes, by special events like ball games that create demand surges, or by adverse weather that reduces capacity.

Nearly half of weekday peak period congestion delay in California, for instance, occurs at 600 recurrent bottlenecks. Taking measures to address the severity of just these bottlenecks would adjust congestion significantly. "
-Dr. Pravin Varaiya, U.C.. Berkeley, "What We've Learned about Highway Congestion"

The plan will address bottlenecks at all critical locations and in cooperation with the State, better management of accidents can also reduce congestion.

#### New Ward Center Bus Terminal

Because this plan will rely heavily on hybrid buses (over 50 of which are sitting idle in bus yards during the peak periods), a new bus terminal on Auahi Street will be developed. Expresses buses from the West Side will arrive at the terminal and can return to their origin or continue as a regular bus to Ala Moana Center.

We may also deploy contracted tour buses at the new terminal for direct worker transportation to Waikiki.

One of the important pieces of the plan is that it offers flexibility in modes of transit, allowing us to make these changes.



#### Traveling from the West Side: Quick and EZ

#### Bus Rapid Transit

From Kapolei and Ewa Beach, Bus Rapid Transit (BRT) connectors to Waipahu will be accompanied by a guided bus on exclusive narrow new lanes, some parts of which will be elevated (overpasses) so that the guided buses can bypass regular traffic at traffic lights.

A Farrington Highway on ramp in Waipahu is included in the plan which will allow traffic to move on to and off of the new elevated zipper lanes.

Express buses from Waianae and Makakilo will be able to use upgraded H-1 freeway shoulders to get to the elevated zipper lanes quicker. Express buses will also come from Mililani and Wahiawa. This part of the plan includes on and off ramps to and from the elevated zipper lanes.

#### Reversible 3-lane Elevated Zipper Lanes without Tolls

Starting at the H1/H2 merge and traveling along the previously approved "LPA" tour, an elevated highway with three reversible zipper lanes will be built virtually over the current Kamehameha and Nimitz Highways.

The elevated zipper lanes will terminate at Pier 16 with off ramps at Aloha Stadium/Pearl Harbor, Lagoon Drive and Waiakamilo Street. The right lane is a fixed guideway as an exclusive bus lane.

The other two lanes will allow for vanpools, 3+ high occupancy vehicles, and green single occupancy vehicles which get 33 mph or more (EPA city miles per gallon rating) to move at a continuous speed of 60 miles per hour. These requirements (minimum occupancy of three, vanpools and fuel efficient single occupancy vehicles) will be strictly enforced with heavy fines. No trucks will be allowed at any time on the elevated zipper lanes.

Non-green single occupancy vehicles can still use the H-1 and Nimitz to get into town. Because of the elevated zipper lanes, traffic congestion on H-1 will be considerably reduced.

Note: Elevated zipper lanes are open to emergency vehicles at all times.



#### -Traveling from the West Side: Quick and EZ

#### Downtown Honolulu

At Iwilei, the fixed guideway lane will allow buses to go to Hotel Street to connect to King and Beretania, where an improved BRT will run to and from the University of Hawaii at Manoa.

At Ala Moana Boulevard, an underpass or mini tunnel will be built starting east of River Street and ending at both Alakea and Halekauwila Streets. This will be a reversible tunnel in the PM period, allowing Halekauwila and Bishop Street traffic to contra flow back on to the elevated zipper lanes.

The impact to downtown streets is "ZERO" and capacity will be freed up.



# Kobayashi Transit Blueprint A Plan for Economic and Congestion Relief

# Technical Summary

## Ann Kobayashi Mayoral Candidate 2008

Professor Panos Prevedouros Senior Advisor, Infrastructure 2008



## **Rubber Tire on Concrete**

- <u>EzWay</u>: 15 mile, 2 lane elevated zipper lane + 1 lane rubber tire on concrete fixed guideway.
- Exclusive bus-only lanes include expanded shoulders on H1,
   Farrington and Fort Weaver Rd.
- Downtown underpass fixes Alakea and Halekauwila left turn congestion and lets buses "disappear".
- University BRT runs on priority lanes on King & Beretania
- Long-overdue optimization, e.g. signals, work hours, UH start times, & updated bus scheduling/rounting.



# **Key Benefits**

- Best reduction of congestion: similar to summer break traffic flow all year long.
- Leverages flexibility and on-the-fly reconfiguation of buses and lanes.
- Serves far more people than rail line.
- Minimizes transfers and lost productivity.



## **Ewa Beach to Town: 33 min**

- Express Bus rides on Fort Weaver Road maintaining average speed of 30 MPH.
- Skip over busy intersections with "Queue Jumping" overpass/underspass.
- Use expanded bus-only shoulder on Farrington Hwy.
- Gets on EzWay for 50mph average speed all the way to Hotel Street destination.



# Waipahu to Waikiki

- Express Bus rides on Kamehameha or Farrington Highway maintaining average speed of 30 MPH.
- Bypasses congestion using bus-only overpasses and expanded shoulder lanes.
- Gets on EzWay for 50mph average speed to Hilo Hattie exit. Arrives in 24 minutes from Waipahu.
- Bypasses downtown traffic via downtown mini-tunnel.
- Transfer at Ward-area bus station to Waikiki express bus.



# Kapolei to UH

- Express Bus rides Farrington Hwy maintaining average speed of 30 MPH.
- Bypasses congestion using bus-only overpasses and expanded shoulder lanes.
- Rides the EzWay for 50mph average speed to Hotel Street.
   Arrives in 28 minutes from Kapolei.
- Transfer to expess bus service using exclusive rush hour buslane via King Street to UH.
- Returns to Hotel Street via exclusive rush hour buslane on Beretania.



## Mililani to Town: 26 min

- Express Bus rides on expanded bus-only shoulder on H2 or Kamehameha Highway.
- Gets on EzWay for 50mph average speed to Hilo Hattie exit.
- Bypasses downtown traffic via downtown minitunnel.
- Arrives at Halekauwila.



# Serves More People

- Train system will serve fewer than 3% of the daily trips on Oahu.
- Train will, at most, reduce congestion by a tiny 6% at best.
- EzWay will serve 300% more daily trips and reduce congestion by 500% better than Mufi's train.
  - Benefits both mass transit and drivers.



## **A Sensible Solution**

- High Performance, low-cost rubber tire on concrete fixed guidway is best mass transit.
- Two lane zipper serves those that must drive.
- Everyone gets to work sooner.



# Kobayashi Transit Blueprint A Plan for Economic and Congestion Relief

# **Economic Summary**

## Ann Kobayashi Mayoral Candidate 2008

Professor Panos Prevedouros
Senior Advisor, Infrastructure 2008



# **Economic Summary**

- More local jobs than train.
- Vendor estimates at 60% cheaper than full train plan
   less tax impact.
- Qualifies for <u>both</u> FTA <u>and</u> FHWA funding.
- Flexible, modular project; some parts can start immediately.
- Congestion relief to more people means big boost to productivity which is key to any economic growth.



# Local jobs, Local Spending

- Creates more jobs for what local people already do and are trained for.
  - Mufi's train will require importing workers that have built rail systems
- All technology is US-based.
  - Steel on steel rail spends our tax dollars on foreign nations



# **Lighter Tax Burden**

Plan	Full Build Estimate	Fed Funding	Years of GE tax surcharge req'd	Burden per House- hold
EzWay	\$2.5Bln	At least \$1.2Bln	9	\$4,533.87
Mufi's Train	\$6.5Bln	\$1.2Bln	36	\$18,484.22



## More economical than train

- Cost estimates of 40 mile service at \$2.5Bln
- 60% less than \$6.5Bln of full 34 mile rail segment.
- Sensible alternative to city's ill-conceived
   "Managed Lanes" proposal in AA.
- Maintenance cost for EzWay is 1/10th of cost to maintain Mufi's train system.



# Best of 3 govt. funding worlds

- Rubber tire on concrete fixed guideway lane qualifies for FTA (transit) Funds.
- Elevated 2-lane zipper lanes qualify for FHWA (highway) funds.
- EzWay partially follows LPA and still qualifies for state G.E.T. funds.



## **Can Start Sooner**

- Modular design is true multi-modal system.
- Some aspects of blueprint can start immediately for quick economic boost.
- Other parts of project already have EIS' completed or in process, e.g. Auahi St. BRT.
- Flexibility of design eliminates "My way or the highway" type of irresponsible mentality.



## **Best Boost for Us**

- Most significant long-term impact to economy is productivity.
- Train system will serve fewer than 3% of the daily trips on Oahu and reduce congestion by an imperceptable 6% at best.
- EzWay will serve 300% more daily trips and reduce congestion by 500% better than Mufi's train.
- Better congestion relief is one more attraction for doing business in Honolulu.



# The Best Plan for our Economy

- More local jobs.
- Less burden on local taxpayers.
- More economical than Mufi's train.
- More Federal Funding.
- Starts Sooner.
- Serves far more taxpayers.



# Kobayashi Transit Blueprint A Plan for Economic and Congestion Relief

# Environmental Summary

## Ann Kobayashi Mayoral Candidate 2008

Professor Panos Prevedouros Senior Advisor, Infrastructure 2008



## Malama 'Aina

- Smaller carbon footprint than Mufi's train.
- Preserves ocean views in town.
- Faster adaptation of newer, greener technologies.
- Easy on the ears.



# **Cooler for Global Warming**

- Existing HOV on EzWay already more energy-efficient than Mufi's train.
- "EzGreen Pass" means Electric or Hybrid vehicles can use EzWay as SOV.
- Hydrogen buses currently being tested have zero carbon footprint.



## **Preserves Town Ocean Views**

- EzWay ends at Iwilei on Nimitz.
- Runs along existing Farrington, Kamehameha, Nimitz Hwys.
- Far less disruption, condemnation, relocation than Mufi's train.
- Beautiful ocean views from downtown to Waikiki are preserved.



## **Gets Greener Faster**

- The future of vehicles are hybrid, plug-electric, and hydrogen fuel cells.
- Modular design allows individual vehicles to upgrade to cleaner, greener operation on an asjustified basis.
- "EzGreen Pass" will accelerate individual upgrades.
- Mufi's train requires substantial HECO power upgrades which are nowhere in sight.



# Easy on the Ears

- Mufi's train: "nails on chalkboard" sounds going through residential areas almost every minute from 4am until midnight.
- EzWay: Most of route is on existing highways with minimal additional impact regions are already used to buses and cars.



# A Bright Green Honolulu Future

- Smaller Carbon Footprint.
- Natural incentive for upgrade to greener, cleaner cars.
- Maintains beauty of Honolulu.
- You'll still hear the Mynah birds in the morning.



# Kobayashi Transit Blueprint A Plan for Economic and Congestion Relief

# **Executive Summary**

# Ann Kobayashi Mayoral Candidate 2008

Professor Panos Prevedouros Senior Advisor, Infrastructure 2008



## The Best Choice for Honolulu

- Gets you into town sooner.
- 60% more economical than Mufi's Train.
- More local jobs, starts now.
- Keeps Hawaii beautiful Malama Aina.



## What is it?

- <u>EzWay</u>: Elevated zipper lanes with a fixed guideway.
- Express buses serving Ewa Beach, Kapolei, Mililani, and UH.
- Re-engineered downtown traffic to reduce congestion.



## **Faster Commutes for All**

- Forecast to reduce H1 congestion to "summer break" levels, all year long.
- Express buses deliver commute times competitive to autos getting into town:
  - Ewa Beach: 33min
  - Kapolei: 28min
  - Mililani: 26 min
  - Waipahu: 24min



## **Economics**

- Full system costs estimated at \$2.5B vs. \$6.4B for Mufi's train.
- Construction uses local labor vs. import of foreign workers.
- Combination of Fixed Guideway and elevated zipper lanes qualify for <u>both</u> FTA and FHWA funds.



## Malama 'Aina

- Uses existing Kamehameha and Nimitz Hwy.
- Preserves local neighborhoods and small businesses.
- Saves ocean and mauka views Traffic "disappears" downtown.
- No additional noise.



### **Starts Now**

- Parts of plan can begin immediately to bring both congestion and economic relief.
- Completed EIS studies for some of the plan means work can start sooner than Mufi's train.



## A Better Way to Reduce Congestion

- Significant reduction of H1 congestion.
- Buses can get into town sooner than cars.
- Sooner start to employ local workers for local jobs instead of importing specialized labor.
- Much lower burden on taxpayer yet better performance.
- Keeps Hawaii beautiful.



### Take it EZ

## The Kobayashi Transit Plan

Drive your car. Ride a Bus. Get into a Vanpool.

Read more about how the plan's sensible solutions work to ease traffic congestion and make it easy, everyday.



### Small Businesses on Kona Street: No Condemnation

Businesses like Scott's Sandals and Island Pool and Spa will be relieved to know that their businesses will not be condemned or blocked by rail.

The Kobayashi Transit Plan favors the 'Aina in a way rail never could.

Not only does it work to preserve view planes, the noise levels are way down, and small businesses on Kona Street that would have been lost to rail are preserved."

All of us know and love the giant plumeria tree in front of the lamp shop on Kona Street.

Mufi's steel-on-steel rail will take it away. This Transit Plan will allow it to flourish for many more years to come.



# It's EZ Ewa Beach to Downtown

*Victor and Heather live in Ewa Beach on the Leeward Coast.* They are in their early thirties, with a combined income of just under \$70,000. They don't have kids yet, and both work in downtown Honolulu. They have been driving into town together and are sick of the traffic congestion.

They are considering getting out of the car onto some type of public transportation and have heard a lot about the rail. However, they have recently learned that the rail will be a steel-on-steel train, not a monorail like they thought, and it will stop every six minutes on the way into town. It will take them practically as long as the car takes them, and they have learned that the rail will not serve Ewa Beach. This means they have to drive to Kapolei, pay \$60 a month for parking and pay \$4.00 each way to ride the rail.

The current economic crisis hasn't cost them their jobs, but the cost of fuel is out of control and they can't afford to buy one of those new hybrid cars. They don't know what to do ... because they know that if they vote for rail, they will be paying an increased property tax which will make it practically impossible for them to meet ends.

#### With this Transit Plan ...

Victor and Nancy will be able to hop on the bus in Ewa and get to downtown in less time than when they drive their car. The bus will be a guided bus that will run along side other traffic, and won't have to stop at intersections because of traffic congestion features that include overpasses at intersections. The guided bus will be able to go onto the new elevated zipper lanes, joining the other guided buses in the fixed lane right into downtown.

Their friends in Kapolei can do the same thing.

Nancy's sister, who lives in Waipahu, will be able to use the new Farrington Highway on-ramp to and from the elevated zipper lanes. When she gets her new electric car she can drive in the fixed lane for free. In the meantime, she can ride the bus.

Guided buses on exclusive narrow new lanes will run on existing roads with improved shoulders. Some parts of the narrow lanes will be elevated at intersections for "queue jumping" so that the guided buses do not get stopped at traffic lights.

This part of the plan also includes the new on-ramp at Farrington Highway for Waipahu residents.

This plan will serve Ewa Beach and Waipahu, which rail will not.

Guided bus riders will not have to transfer or pay for expensive parking to get on the train and the travel time will be as good or better than rail and the bus will not stop so many times.



# It's EZ Mililani to Downtown

Ted and his family live in Mililani. They were one of the first people to buy a home in Mililani – Hawaii's "American dream town." They moved there because they of Oahu. Development of Mililani started in the 1960's by Castle & Cooke, whose plan was to make Mililani Town a satellite city that would have "real" neighborhoods, a town center, a new high school and would satisfy the pent up demand for new housing.

Ted and his family had no idea when they moved to Mililani how bad the traffic would get for Ted on his way to work. Their kids are teenagers now, and they go to Mililani High School. Ted's wife doesn't work. That's fine for all of them, but Ted is still faced with a long commute to town and back every day. He has figured out that the steel-on-steel train that is being proposed will not serve Mililani so he is still stuck with the same commute every day... or, he has to drive to Kapolei, park his car and get on the train.

#### With this Transit Plan ...

Ted can buy the new Chevy Volt, an all electric car, and he can drive from Mililani and jump on the elevated zipper lanes at the H-1, H-2 merge. Because the Volt is an all electric car, Ted doesn't even have to drive his neighbors into town because he qualifies to ride the zipper lanes as a single occupancy vehicle. The driving time for Ted will improve vastly. The Volt doesn't come out until 2010 so in the meantime, Ted will keep driving his neighbors to town so they can get into the HOV lane. It will still irritate him to see cars with only one person in them in the HOV lane, but all of that will change with Ann's plan.

Finally, Ted will be able to get home on time to sit down with his family at dinner, instead of eating alone in front of the television as he often does now.

The drive from Mililani will be vastly improved because single occupancy vehicles and vanpools will be able to access the elevated zipper lanes and drive into downtown at a comfortable 60 miles an hour.



# It's EZ Waimanalo to UH

*Derek and his friends* were really lucky to find a house in Waimanalo. Right now a couple of them ride the bus into town and have to leave really early to get to class.

Derek drives to UH because he has to go to work after class, and needs his car so that he can drive home after 10:00 p.m. He is really glad when the weekend arrives so he can relax on that beautiful beach.

Derek has always been against the steel-on-steel rail. In the first place, it will never reach Waimanalo and he plans to live there for a long time. Also, he is taking an engineering class and he figured out that the developments at the transit stops will look more like Makiki than Waimanalo or Kailua. No offense to Makiki, Derek thinks, but we need more places like Waimanalo and Kailua. Besides, it's not Hawaii-style to live in a high-rise. There are plenty of those midtown.

#### With this Transit Plan...

Even Derek and his friends will benefit. The traffic light synchronization that has been overlooked for so long in Hawaii will make traffic from Waimanalo through Hawaii Kai and onto H-1 move smoothly and much faster. His friends can take a later bus, and he will be able to leave a little later, too.

Most of us know the phrase "let's synchronize our watches," so it is easy to deduct that in the case of traffic lights it means to make them work together.

Synchronization is the process of maintaining one operation in step with another. It came into wide usage in the US in the transportation industry in the 19th century, when railroads were expanding all over the country and preventing crashes were totally dependent on human beings.

Lack of synchronization
is a big reason why people
run red lights so often,
and cause crashes. Lack of
synchronization is also
a big contributor towards
traffic congestion.

If it's been around since the 19th century, it makes you wonder why its not already in place in our city. It is a matter of priority, and this plan makes it a priority.



## The Ann Kobayashi Transportation Plan for Oahu Engineering Summary

- 1. Kapolei and Ewa Beach Bus Rapid Transit (BRT) connectors to Waipahu:
  Guided bus on exclusive narrow new lanes, some parts of which will be elevated for intersection "queue jumping." Includes a Waipahu (Farrington Hwy.) on-ramp to/from elevated zipper lanes.
- 2. Express buses from Waianae and Makakilo may use H-1 freeway shoulders (upgraded) to get to the elevated zipper lanes quicker. Same for express buses from Mililani and Waihiawa. Includes on-ramps to/from elevated zipper lanes.
- **3. Reversible 3-lane elevated zipper lanes** starting at H-1/H-2 merge and terminating at Pier 16 with off-ramps at Aloha Stadium/Pearl Harbor, Lagoon Drive and Waiakamilo St.

Right lane is exclusive bus lane.

At Iwilei, elevated one lane link goes to Hotel St. to connect with King/Beretania BRT (*University spur BRT*).

The facility will open with minimum occupancy requirement of three people per car: Oahu's 3+ elevated zipper lanes and busway (*EZ busway*).

No tolls will be collected.
Automated steep fines for low occupancy violators.
No trucks allowed at any time.
Open to all emergency
vehicles at all times.
Open to green vehicles (>35 mpg)

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## The Ann Kobayashi Transportation Plan for Oahu Engineering Summary

**4. Ala Moana Blvd. Downtown Underpass** (mini-tunnel) starting east of River Street and ending both at Alakea and Halekauwila.

Same tunnel reverses in the PM period from Halekauwila and Bishop St. to Nimitz Hwy. contra-flow onto the elevated zipper lanes.

Underpass may continue to large new parking lot(s) east of Punchbowl St. so some vehicular traffic may actually "disappear" from downtown by going from the EZ busway, through the mini-tunnel to a parking structure. This frees up capacity in downtown area.

- **5. New Ward Centers bus terminal** on Auahi St. Express buses that arrive from the EZ busway stop at this terminal and either return to origin, or continue as regular bus to Ala Moana Center. We may also deploy contracted tour buses at this terminal for direct worker distribution to Waikiki hotels.
- **6. University BRT** runs on priority lanes and with priority signaling along King and Beretania Streets.
- **7. Signal optimization** --- Other underpasses (with HDOT) --- Bottleneck fixes (some with Hawaii DOT)— Upgrade TheBus and TheHandiVan scheduling and routing with **advanced technologies** Contracted express bus and special passenger service --- Plan for **4x10 work hours** --- Work with UH to change start time to 9 AM.

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## The Ann Kobayashi Transportation Plan for Oahu Engineering Summary

Billion dollar cost for items (1) through (6) =

0.50 + 0.10 + 0.90 + 0.30 + 0.10 + 0.10 = \$2B, roughly 50/50 FTA/GET funds.

Approximately \$2.5B with contingencies.



### Features and Advantages of this Plan

Elevated zipper lanes with no tolls— Bus lane running at 50+ mph:

Waipahu to downtown in 24 minutes— Express point-to-point buses every 5 to 10 minutes

Same or better travel time than rail – Much fewer transfers. No transfers for major origins and destinations, e.g., Waipahu-Pearl Harbor and Airport, Waipahu-Kalihi, Waipahu-Downtown, Waipahu Waikiki

Congestion relief on H-1 (remove high occupancy and green vehicles). Congestion relief downtown.

The plan works with buses which are adaptable to non-fossil fuel propulsion technology such as fuel cells and electric drives.

Twice the service reach (length) as 20 mile rail.

Reliable travel times between Ewa and Kapolei in Leeward, and Kaka'ako and UH in town.

Flexible, expandable, adaptable with familiar technology; no specialized labor to install or maintain vehicles or structures of the plan.

FTA fundable— Nimitz Hwy. flyover has approved EIS.

Removes all buses and vanpools from zipper lane.

With input from Senior Infrastructure Advisor Panos D. Prevedouros, PhD





-For more information-Annlistens.com

For a Change.

